

HSS

Joint Pain in Patients with Lupus: Is It Really Arthritis?

Diagnosing and managing lupus-related conditions such as synovitis, myalgia, myositis, tendonitis, osteonecrosis, osteoporosis, joint infection, and fibromyalgia

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Introduction

Joint pain is a very common complaint in lupus and may lead to difficulty with one's usual daily activities. A rheumatologist will try to determine the origin of pain, whether it is in the joint lining (which is true arthritis), the soft tissues around the joint (due to problems with tendons or ligaments), or the bones. Upon diagnosing the origin, he will then dictate the proper therapy. Although joint pain is usually due to lupus, it may also be due to medication complications or an associated rheumatologic condition.

I. **Joint Pain Due to Arthritis**

II. **Pain in Muscles or Tendons Around the Joints Due to Lupus**

III. **Joint Pain Unrelated to Lupus Arthritis**

I. Joint Pain Due to Arthritis

Arthritis or **synovitis** (inflammation of the joint lining, called synovium) is common in **Systemic Lupus Erythematosus (SLE)**; up to 90% of patients will have arthritis sometime during their experience with the disease.

Lupus arthritis has many similarities - but also differences - with **rheumatoid arthritis (RA)**. In both cases, the disease affects many joints in a symmetric distribution (i.e., both wrists and hands will be affected at the same time) and there is a predilection for involvement of the hands and wrists. Lupus associated arthritis, however, is not as severe and causes less swelling, shorter periods of morning stiffness, and only rarely causes erosions to the bone (holes in the bones around the joint).

The symptoms are often of short duration (days) and may change location from one joint to another. The pain is usually more severe than expected based on the appearance of the joint on examination. In fact, sometimes there is pain without swelling or even tenderness in the joint, in which case the symptom is called “arthralgias” (literally meaning “joint pain” in Greek).

In about 5-10% of patients with lupus arthritis, there are significant deformities (misalignment of the bones) of their joints, mainly affecting the fingers. Characteristically the fingers deviate towards the direction of the little finger and become bent in such a way that they are called “swan neck deformities,” as the finger now resembles the neck of a swan. Although the deformities in lupus are similar to those occurring in RA, they are not due to bone damage but instead to ligament and tendon laxity, and therefore are easily “correctable” with external pressure. This condition is called “Jaccoud’s Arthropathy” and usually happens in patients with long-lasting disease. Interestingly, **MRI (magnetic resonance imaging)** or **ultrasound imaging** shows fluid around tendons and thickening of the joint capsule (the outer cover of the joint), but not true synovitis. Of note, anti-CCP, a test used in diagnosing RA, may be positive in lupus patients with this condition.

In another 3-5% of patients, the arthritis looks remarkably similar to RA, including the formation of erosions and synovitis on the MRI. Because of the similarity, this condition is sometimes called “rhupus.” These lupus patients may also have a positive anti-CCP test. It is still not clear whether rhupus represents an overlap of RA and SLE, or simply another form of lupus.

Management

Lupus arthritis is often first treated with **nonsteroidal anti-inflammatory medications (NSAIDs)**, such as ibuprofen or naproxen. If the patient does not have a good response or there are contraindications to the above medications, short courses of low doses of glucocorticoids (i.e., 5-10 mg of prednisone) may be used. In unresponsive cases, Disease-Modifying Antirheumatic Drugs (DMARDs) such as methotrexate and azathioprine may be used. The rheumatologist usually makes decisions about the different therapies based on whether other organs are also involved by the disease.

II. Pain in Muscles or Tendons Around the Joints Due to Lupus

Often patients complain of pain that does not come from the joint itself, but rather the muscles (myalgia and/or myositis) or tendons (tenosynovitis or tendonitis) around the joint.

Myalgia/Myositis

Pain in the muscles (myalgia) is a common complaint among lupus patients (50-80%). The upper arms and thighs are commonly involved areas. When the pain is accompanied by muscle weakness, the condition is more severe and it is called **myositis** (5-10% patients). In that case blood tests, such as the CPK, are elevated, indicating muscle injury, and the condition is managed similarly to Dermatomyositis or Polymyositis.

Tendonitis

Tendonitis refers to inflammation of the tendons (fibrous tissue that connects muscles to the bones). This condition is also relatively common in lupus (10% of cases) and may affect the elbow (epicondylitis, also known as **tennis elbow**), shoulder (rotator cuff), heel (**Achilles tendonitis** or **plantar fasciitis**). Tearing of the tendons rarely occurs.

Management

Most cases of myalgia and tendonitis will respond to joint rest, physical therapy, and treatment with nonsteroidal anti-inflammatory medications. **Injections** of steroids or surgery may be required in more difficult cases. Myositis typically requires more intense therapy with high doses of glucocorticoids with or without DMARDs.

III. Joint Pain Unrelated to Lupus Arthritis

Not all joint pains are due to lupus. Other conditions that need to be considered include the following:

Osteonecrosis

Osteonecrosis refers to the death of bone tissue (bone necrosis). Depending on its severity may either cause no symptoms, cause significant joint pain, and/or often collapse of the bones.

This condition is relatively common in lupus (about 10% of patients), but does not relate to the disease activity. In fact, osteonecrosis often happens when the lupus is quiet. It is often attributed to long-term use of high doses of glucocorticoids.

The most common joints to be affected are the hips (manifested as pain in the groin), followed by the knees and shoulders. The diagnosis is often made by a plain **x-ray**. However, in early stages an MRI is necessary to show the problem.

Management

Early stages may benefit from conservative therapy including pain medication and limited weight bearing. In more advanced disease, surgery is required. In cases of hip bone collapse, **hip arthroplasty (replacement)** will need to be performed.

Osteoporotic Bone Fracture

Osteoporosis (weakening or thinning of the bone) may occur in lupus due to the disease or the medications used (especially glucocorticoids).

Usually, patients complain of sudden pain in a localized area of the spine, sometimes after only minimal trauma. X-rays will usually show the fracture as a compression (loss of height) of a vertebra. Sometimes MRI will be necessary for subtle cases. Fractures may also involve long bones such as the hip.

Management

The best therapy is **prevention**. Patients should have a **bone mineral density test (DXA)** to assess their bone status and should optimize their intake of calcium and vitamin D. In many cases, a potent anti-osteoporosis agent such as a bisphosphonate or parathyroid hormone will also be needed for extra protection.

Septic Arthritis

Septic arthritis, or joint infection, is a medical emergency and requires prompt diagnosis and therapy. Despite the fact that patients with SLE take medication that “lower” the immune system and therefore make it easier for an infection to occur, septic arthritis is not very common in lupus. Causative infectious agents may include *Staphylococcus aureus*, *Neisseria gonococci* (a sexually transmitted disease), etc.

Management

Aspiration (extraction) of synovial fluid from the joint is performed along with blood tests. Once the bacterial strain is identified, antibiotic drugs are prescribed accordingly. In most cases, surgery is required for “cleaning” of the joint.

Fibromyalgia

This is a chronic condition of widespread pain and exhaustion. **Fibromyalgia** can exist by itself or accompany other diseases such as lupus. However, it is not due to active inflammation from lupus and therefore no extra immunosuppressive therapy is required.

Management

Management is often difficult and requires full commitment by the patient. Improvement of sleep, regular and slow-advancing aerobic exercise, behavioral therapy, and anti-depression medications are often needed for optimal results.

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